

Comparisons of Job Characteristics

Focus Occupation: [Mechanical Engineering Technicians \(17-3027\)](#)

Associated Occupation: [Bus and Truck Mechanics and Diesel Engine Specialists \(49-3031\)](#)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 70

Focus Occupation: Mechanical Engineering Technicians (17-3027)

Associated Occupation: Bus and Truck Mechanics and Diesel Engine Specialists (49-3031)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Mechanical	6.8	21.1	18.0	<	Expanded education and/or training may be required
Transportation	4.6	9.6	4.2	<<	Extensive education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 52

Focus Occupation: Mechanical Engineering Technicians (17-3027)

Associated Occupation: Bus and Truck Mechanics and Diesel Engine Specialists (49-3031)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Repairing	3.4	11.2	6.6	<<	Extensive development of skills in this area may be required
Troubleshooting	4.5	11.0	7.3	<<	Extensive development of skills in this area may be required
Equipment Maintenance	3.5	10.2	6.8	<<	Extensive development of skills in this area may be required
Operation Monitoring	6.6	10.0	10.7	0	Current skill level may be sufficient
Operation and Control	5.4	9.7	9.0	0	Current skill level may be sufficient
Quality Control Analysis	5.9	9.4	10.2	0	Current skill level may be sufficient
Equipment Selection	3.3	7.5	6.2	<	A higher skill level may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities

Similarity of Focus Occupation to Associated Occupation: 62

Focus Occupation: Mechanical Engineering Technicians (17-3027)

Associated Occupation: Bus and Truck Mechanics and Diesel Engine Specialists (49-3031)

Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Control Precision	6.6	12.3	10.2	<	Some improvement in abilities may be required
Manual Dexterity	6.5	11.9	8.6	<<	Extensive improvement in abilities may be required
Multilimb Coordination	6.0	11.9	8.8	<<	Extensive improvement in abilities may be required
Finger Dexterity	7.6	11.8	9.6	<	Some improvement in abilities may be required
Arm-Hand Steadiness	6.8	11.6	9.0	<<	Extensive improvement in abilities may be required
Hearing Sensitivity	5.6	11.4	7.4	<<	Extensive improvement in abilities may be required
Extent Flexibility	4.8	10.3	6.1	<<	Extensive improvement in abilities may be required
Speed of Limb Movement	3.2	6.9	5.3	<	Some improvement in abilities may be required
Glare Sensitivity	2.6	6.4	3.7	<<	Extensive improvement in abilities may be required
Sound Localization	2.2	5.9	3.4	<<	Extensive improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: 78

Focus Occupation: Mechanical Engineering Technicians (17-3027)

Associated Occupation: Bus and Truck Mechanics and Diesel Engine Specialists (49-3031)

Work Activities	Exclusivity of Activity
Diagnose mechanical problems in machinery or equipment	65
Operate pneumatic test equipment	82
Read blueprints	10
Read schematics	34
Read technical drawings	7
Read vehicle manufacturer's specifications	76
Set up and operate variety of machine tools	62
Understand service or repair manuals	40
Understand technical operating, service or repair manuals	6
Use electrical or electronic test devices or equipment	40
Use knowledge of metric system	39

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus
Occupation to Associated
Occupation: 83

Focus Occupation: Mechanical Engineering Technicians (17-3027)

Associated Occupation: Bus and Truck Mechanics and Diesel Engine Specialists (49-3031)

Tools and Technologies	Exclusivity
Computer data input devices	2
Computers	1
Content authoring and editing software	1
Cutting and crimping and punching tools	3
Electrical measuring and testing equipment	7
Face and head protection	7
Forming tools	2
Heating equipment and parts and accessories	19
Holding and clamping tools	3
Indicating and recording instruments	2
Industry specific software	1
Length and thickness and distance measuring instruments	2
Machine tools	7
Machinery for working wood and stone and ceramic and the like	12
Measuring and layout tools	3
Mechanical instruments	14
Power tools	2
Pumps	9
Rough and finishing tools	5
Safety apparel	4
Soldering and brazing and welding machinery and supplies	6
Special tooling fixtures	16
Vision protection and accessories	3
Wrenches and drivers	2

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.